

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARK EDWARD MCCONNELL, MICHAEL FRANK FRYAUF,
DECLAN CONNOLLY and GERALD S. SZCZECH

Appeal No. 2002-1213
Application No. 09/293,019

ON BRIEF

Before COHEN, FRANKFORT, and STAAB, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 38, all of the claims pending in this application.

Appellants' invention relates to an apparatus and process for manufacturing toothbrushes. As noted on page 5 of the specification

[t]he invention permits the manufacture of articles (e.g., toothbrush bodies) having a predetermined variety of properties (e.g., different colors) from a single mold in a single molding cycle. This in turn allows control over the subsequent manufacture and packaging of toothbrushes such that single packages of multiple toothbrushes can be manufactured where each package contains a predetermined multiple of toothbrushes having different properties (e.g., a predetermined number of red, yellow or blue handled toothbrushes in a single package). The invention also permits the selection of a predetermined variety of articles to achieve an array of articles having a variety of properties. The present invention thus avoids the need for manual intervention or assistance in the mixing of toothbrushes to achieve a desired mixture of toothbrushes having different properties in a single package.

Independent claims 1, 19, 25, 34 and 38 are representative of the subject matter on appeal and a copy of those claims can be found in the Appendix to appellants' brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Boucherie	5,588,714	Dec. 31, 1996
Lui (British Patent Application)	GB 2 276 580 A	May 10, 1994

In addition to the foregoing prior art references, the examiner has also relied upon appellants' admitted prior art

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(AAPA) set forth on pages 1 and 2 of the specification in the "Background of the Invention" section.

Claims 1 through 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art (AAPA) in view of Boucherie and Lui.

Rather than reiterate the examiner's full statement of the above-noted rejection and the conflicting viewpoints advanced by the examiner and appellants regarding the rejection, we make reference to the examiner's answer (Paper No. 23, mailed October 30, 2001) for the reasoning in support of the rejection, and to appellants' brief (Paper No. 22, filed September 25, 2001) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellants' specification and claims, to the applied prior art references and AAPA, and to the respective

positions articulated by appellants and the examiner.¹ As a consequence of our review, we have made the determination which follows.

In rejecting claims 1 through 38 under 35 U.S.C. § 103(a) on the basis of the collective teachings of the AAPA, Boucherie and Lui, it is the examiner's position (answer, pages 3 and 4) that the AAPA discloses that 1) toothbrush bodies are generally made by injection molding machines, 2) different components of the toothbrush bodies may differ in characteristics, such as color, and 3) during manufacture the toothbrush bodies are automatically removed from the molding machine and deposited onto a cooling conveyor (specification, page 1, lines 12-24). In addition, the AAPA is said to disclose that a conveyor removes the toothbrush bodies and orients them to receive the tufts of bristles and that the toothbrushes are automatically deposited onto a tray upon completion of the manufacturing operation (specification, page 1, lines 25-34). What the examiner finds lacking in the AAPA is any teaching of molding toothbrushes

¹ Our review of the examiner's answer reveals that the entire discussion in the lower half of page 4 of the answer should apparently be with regard to Lui and not Boucherie as the examiner indicates.

simultaneously and automatically transporting the toothbrushes to a tufter station as claimed by appellants.

To address the deficiencies in the prior art the examiner turns to Boucherie and Lui, urging that Lui teaches "the basic concept of using a mould 14 to inject material on wherein the mould includes a two part mould and with a plurality of injection units 13." In addition, the examiner notes that Lui (p. 8 lines 15+) teaches that molding materials of different colors can be injected into the cavities of the mold so that there are a plurality of groups of different color. The examiner then makes the assertion that "[i]t is inherent that the different colored toothbrushes are separated and packaged according to color as disclosed by AAPA." Boucherie is said to show "the concept of using automatic removing means 11 to remove the toothbrushes automatically."

From the above teachings, the examiner has concluded that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention "to provide AAPA with molding means as taught by Lui and automatic removal means as taught by Boucherie to expedite the manufacturing process." The examiner

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further contends that the automatic removal step of Boucherie is "entirely obvious to apply to any station in the process/apparatus to expedite the manufacturing process over manual removal means."

Having reviewed and evaluated the applied prior art references and AAPA, we are of the opinion that the examiner's position regarding the purported obviousness of claims 1 through 38 on appeal represents a classic case of the examiner using impermissible hindsight derived from appellants' own disclosure in an attempt to reconstruct appellants' claimed subject matter from disparate teachings and broad concepts purported to be present in the applied prior art. In our view, there is no motivation or suggestion in the applied references to Boucherie and Lui which would have reasonably led one of ordinary skill in the art to modify the AAPA in the particular manner urged by the examiner so as to result in appellants' claimed subject matter.

Like appellants (brief, page 4), we note that the removal means (11) shown in Figure 1 of Boucherie is located downstream from the tufter and removes finished (i.e., tufted and end-rounded) toothbrushes from an endless conveyor (5) associated

with the tufter. Boucherie makes no mention whatsoever of what is happening upstream of tufter supply mechanism (3) and in no way suggests fully automating the process between a toothbrush body molding machine and a tufter. Boucherie says nothing about the use of or need for a combination of a removal element for removing toothbrush bodies from a molding unit and transport for automatically moving the toothbrush bodies to a tufter or packaging machine, as set forth in appellants' claims on appeal.

Lui addresses manufacturing beaded strings for a beaded curtain (page 6, lines 19+) and provides a molding apparatus for molding discrete plastic beads at intervals along a string. As seen in Figure 4 of Lui, the beads can have different shapes. In addition, Lui notes (page 7) that since the three sets of running paths of mold (14) seen in Figure 4 are separate, the corresponding groups of molding cavities (27) may be injected with different plastic materials and/or plastic materials of different colors, resulting in a multi-look/color beaded string for enhancing eye appeal. Nothing in Lui mentions or relates directly to the manufacture of toothbrushes.

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Since we are in agreement with appellants that the teachings and suggestions that would have been fairly derived from AAPA, Boucherie and Lui would not have made the subject matter as a whole of claims 1 through 38 on appeal obvious to one of ordinary skill in the art at the time of appellants' invention, we must refuse to sustain the examiner's rejection of those claims under 35 U.S.C. § 103(a).

In light of the foregoing, the decision of the examiner to reject claims 1 through 38 under 35 U.S.C. § 103(a) is reversed.

In addition, we REMAND this application to the examiner for an in-depth consideration of the teachings of DE 4423145 and GB 2108379, which documents were cited by appellants in the Information Disclosure Statement filed July 12, 2000 (Paper No. 11). More particularly, we direct the examiner's attention to GB 2108379 which appears to address the same problem confronted by appellants and to solve that problem in the same manner, i.e., by providing a transport or feeding apparatus (1) for automatically moving the molded brush bodies from the molding units (2) to a processing machine (3), such as a brush filling and finishing machine. As for DE 4423145, it appears that this document

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provides for automated transport of toothbrushes from the molds (3) to a further processing station (5) and then to a packaging machine (17). Each of these references should be evaluated along with the AAPA.

As for claims 8-10 and 25-33 on appeal, we note that these claims appear to have problems under 35 U.S.C. § 112, second paragraph, since in claim 8, lines 4 and 5, respectively, there is no clear antecedent basis for "said first injection unit" or "said second injection unit." In claim 25, there is no clear antecedent basis for "said mold cavities" set forth in line 5.

During any further prosecution of the present application the examiner would be well served to treat the claims separately instead of in a "shotgun" fashion and would benefit from following the guidance provided in MPEP §§ 706.02(j) and 2141-2145.

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REVERSED AND REMANDED

IRWIN CHARLES COHEN)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHARLES E. FRANKFORT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
LAWRENCE J. STAAB)	
Administrative Patent Judge)	

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